



UNITED STATES DEPARTMENT OF COMMERCE  
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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/113,329	08/30/93	HARVEY	J 56348

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E3M1/1010

EXAMINER

ART UNIT

PAPER NUMBER

2619

22

DATE MAILED:

10/10/97

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 9/17/96

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 (three) month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 2,3,5, 7-11, 13, 16-20, 22, 23, 31-40, 42, 44, 48-54 is/are pending in the application.  
Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 2,3,5, 7-11, 13, 16-20, 22, 23, 31-33, 35, 40, 42, 44, 48-53 and 55-54 is/are rejected.

☒ Claim(s) 34-38 and 54 is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of Reference Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

PTOL-328 (Rev. 10/95)

SEE OFFICE ACTION ON THE FOLLOWING PAGES --

U.S. GPO: 1996-409-290/40029

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***DETAILED ACTION***

1. This Office Action is responsive to the Appeal Brief which was filed 9/13/96. In view of applicants' arguments, the rejection of the claims in the instant application under double patenting based on the broad analysis of *In re Schneller* (see paper #18) is withdrawn. Accordingly, the finality of the last Office action (paper #18) is also withdrawn.

***DOUBLE PATENTING V.S. PATENTS***

2. After reviewing the restriction requirement under 35 U.S.C. 121 in US Patent 5,233,654, it is now believed that the claims of the instant application are properly subject to a double patenting analysis against US Patent 5,233,654 and US Patent 5,335,277. The position to the contrary in paper #18 appears to have been erroneous. However, after further review, the claims of the present application do not appear to be in conflict with any of the claims found in the parent applications.

***DOUBLE PATENTING BETWEEN APPLICATIONS***

3. Conflicts exist between claims of the following related co-pending applications which includes the present application:

#	Ser. No.	#	Ser. No.	#	Ser. No.
1	397371	2	397582	3	397636
4	435757	5	435758	6	437044

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7	437045	8	437629	9	437635
10	437791	11	437819	12	437864
13	437887	14	437937	15	438011
16	438206	17	438216	18	438659
19	439668	20	439670	21	440657
22	440837	23	441027	24	441033
25	441575	26	441577	27	441701
28	441749	29	441821	30	441880
31	441942	32	441996	33	442165
34	442327	35	442335	36	442369
37	442383	38	442505	39	442507
40	444643	41	444756	42	444757
43	444758	44	444781	45	444786
46	444787	47	444788	48	444887
49	445045	50	445054	51	445290
52	445294	53	445296	54	445328
55	446123	56	446124	57	446429
58	446430	59	446431	60	446432
61	446494	62	446553	63	446579
64	447380	65	447414	66	447415

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67	447416	68	447446	69	447447
70	447448	71	447449	72	447496
73	447502	74	447529	75	447611
76	447621	77	447679	78	447711
79	447712	80	447724	81	447726
82	447826	83	447908	84	447938
85	447974	86	447977	87	448099
88	448116	89	448141	90	448143
91	448175	92	448251	93	448309
94	448326	95	448643	96	448644
97	448662	98	448667	99	448794
100	448810	101	448833	102	448915
103	448916	104	448917	105	448976
106	448977	107	448978	108	448979
109	449097	110	449110	111	449248
112	449263	113	449281	114	449291
115	449302	116	449351	117	449369
118	449411	119	449413	120	449523
121	449530	122	449531	123	449532
124	449652	125	449697	126	449702

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127	449717	128	449718	129	449798
130	449800	131	449829	132	449867
133	449901	134	450680	135	451203
136	451377	137	451496	138	451746
139	452395	140	458566	141	458699
142	458760	143	459216	144	459217
145	459218	146	459506	147	459507
148	459521	149	459522	150	459788
151	460043	152	460081	153	460085
154	460120	155	460187	156	460240
157	460256	158	460274	159	460387
160	460394	161	460401	162	460556
163	460557	164	460591	165	460592
166	460634	167	460642	168	460668
169	460677	170	460711	171	460713
172	460743	173	460765	174	460766
175	460770	176	460793	177	460817
178	466887	179	466888	180	466890
181	466894	182	467045	183	467904
184	468044	185	468323	186	468324

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187	468641	188	468736	189	468994
190	469056	191	469059	192	469078
193	469103	194	469106	195	469107
196	469108	197	469109	198	469355
199	469496	200	469517	201	469612
202	469623	203	469624	204	469626
205	470051	206	470052	207	470053
208	470054	209	470236	210	470447
211	470448	212	470476	213	470570
214	470571	215	471024	216	471191
217	471238	218	471239	219	471240
220	472066	221	472399	222	472462
223	472980	224	473213	225	473224
226	473484	227	473927	228	473996
229	473997	230	473998	231	473999
232	474119	233	474139	234	474145
235	474146	236	474147	237	474496
238	474674	239	474963	240	474964
241	475341	242	475342	243	477547
244	477564	245	477570	246	477660
247	477711	248	477712	249	477805
250	477955	251	478044	252	478107

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253	478544	254	478633	255	478767
256	478794	257	478858	258	478864
259	478908	260	479042	261	479215
262	479216	263	479217	264	479374
265	479375	266	479414	267	479523
268	479524	269	479667	270	480059
271	480060	272	480383	273	480392
274	480740	275	481074	276	482573
277	482574	278	482857	279	483054
280	483169	281	483174	282	483269
283	483980	284	484275	285	484276
286	484858	287	484865	288	485282
289	485283	290	485507	291	485775
292	486258	293	486259	294	486265
295	486266	296	486297	297	487155
298	487397	299	487408	300	487410
301	487411	302	487428	303	487506
304	487516	305	487526	306	487536
307	487546	308	487556	309	487565
310	487649	311	487851	312	487895
313	487980	314	487981	315	487982
316	487984	317	488032	318	488058

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319	488378	320	488383	321	488436
322	488438	323	488439	324	488619
325	488620	326	498002	327	511491
328	485773	329	113329		

4. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of sufficient reason for their retention during pendency in more than one application. The attached Appendix provides clear evidence that such conflicting claims exist among the 329 related co-pending applications identified above. However, an analysis of all claims in the 329 related co-pending applications would be an extreme burden on the Office requiring millions of claim comparisons.

In order to resolve the conflict between applications, applicant is required to either:

- (1) file terminal disclaimers in each of the related 329 applications terminally disclaiming each of the other 329 applications; or
- (2) provide an affidavit attesting to the fact that all claims in the 329 applications have been reviewed by applicant and that no conflicting claims exist between the applications. Applicant should provide all relevant factual information including the specific steps taken to insure that no conflicting claims exist between the applications; or
- (3) resolve all conflicts between claims in the above identified 329 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the above identified 329 applications (note: the five examples in the attached Appendix are



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merely illustrative of the overall problem. Only correcting the five identified conflicts would not satisfy the requirement).

Failure to comply with the above requirement will result in abandonment of the application.

#### ***INFORMATION DISCLOSURE STATEMENTS***

5. Receipt is acknowledged of applicant's Information Disclosure Statements filed 2/1/94, 6/6/94, 6/16/94, 2/17/95, 5/11/95, 1/4/96, 1/19/96, and 6/5/96. In view of the unusually large number of references cited in the instant application and the failure of applicant to point out why such a large number of references is warranted, these references have been considered in accordance with 37 C.F.R. 1.97 and 1.98 to the best ability by the examiner with the time and resources available.

The foreign language references cited therein where there is no statement of relevance or no translation are not in compliance with 37 C.F.R. 1.98 and have not been considered.

#### ***CLAIM REJECTIONS - 35 U.S.C. § 112***

6. Claims 2, 3, 5, 7-11, 13, 16-19, 40, 42, 44, 49-52, and 56-84 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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1) In claim 5, line 15, the term “said units” in the recitation “at least one of said units of programming” has multiple antecedent basis when referred back to the received units of line 6, and to the identified unit(s) and stored unit(s) of lines 9 and 12. Similar clarification is needed throughout the claims.

2) In claim 5, line 21, the recitation “said stored units” appears to require that a plurality of stored units exists. Thus, this recitation is inconsistent, confusing, and indefinite when referred back to the “at least one” limitation of line 12 which clearly attempt to cover embodiments in which there is only one stored unit. Similar clarifications are needed throughout the claims.

3) In claim 7, line 3, the recitations “the signals from said programming sources” and “said programming sources” do not have clear antecedent basis and are indefinite because it is not clear to what the terminology refers (i.e., only a single programming source has been previously recited).

4) In claim 10, line 13, “each said control signal” does not have antecedent basis and is indefinite because it is not clear to what the terminology refers.

5) The recitation set forth in lines 13-14 of claim 10 is confusing and indefinite when taken in the context of the claim because it is not clear how the recited step of “*identifying*” the designated unit of programming is performed both: a) “in response to” each signal which designates the unit of programming; and b) “from” the units of programming themselves (i.e., as appears to be recited). Specifically, it is not clear how the said step of *identifying* the unit of programming *in response* to each signal relates to (and/or differs from) the same step of *identifying* the unit of programming *from* the

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program units themselves; i.e., to what function/operation of the disclosure does the term “in response to” refer? and to what function/operation of the disclosure does the term “from” refer? . Clarification is required.

6) In claim 10, line 16, “the remote programming source” has multiple antecedent basis and is confusing (note the recitations of “a remote programming source” in lines 6 and 7 and in line 10 of claim 10).

7) In claim 17, line 6, “said one control signal” has no antecedent basis and is indefinite.

8) In claim 18, lines 2 and 3, “said units of programming” has multiple antecedent basis and is indefinite because it is not clear if it refers to the prerecorded programming units and/or to the received programming units (see claim 10).

9) Claim 18 is indefinite because the limitations of claim 18 are in direct conflict with the limitations of claim 10. Specifically, the limitations of claim 10 states that “each” of the received plurality of signals designates a unit of programming (see lines 10-12). The limitations of claim 18 then state that only some of the signals designate units of programming. Both sets of limitations cannot be true.

10) In claim 20, line 7, “the received unit” does not have clear antecedent basis and is indefinite.

11) In claim 20, line 9, the use of the alternative “or” in the expression “outputting or playing” is confusing when referred back to the written description because, as described, any stored unit of programming which is *outputted* must also have been *played*. The

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suggestion in the claim that they can be performed separately is confusing and is not understood. Corresponding clarifications are needed throughout the claims.

12) In claim 20, line 16, the use of the alternative “or” in the expression “said computer receiving or having access to a computer schedule” is confusing when referred back to the written description because, as described, the recited schedule always appears to be received by the claimed “computer” (i.e., 73 of figure 6A). The suggestion in the claim the *receipt* of the schedule is somehow independent from its *access* to the schedule is confusing and is not understood. Similar clarifications are needed throughout the claims.

13) In claim 20, line 23, “said unit” of the expression “each said unit” does not have clear antecedent basis and is therefore confusing. Clarification could be made if the expression were changed to simply read --each unit--. Similar clarification is needed throughout the claims.

14) In claim 40, line 8, the recitation “inputting said control signal together with information” is indefinite because it is not clear to what the signal and information is being inputted. Clarification is required.

15) In claim 40, line 13 and 14, the recitation “in response to receiving said control signal and receiving said inputted information” is indefinite because:

a) it is not clear whether the recitation “in response to” refers to both a receipt of said control signal and a receipt of said inputted information, or whether the recitation “in response to” only refers to the receipt of the control signal;

b) it is not clear if the receipt of the control signal in line 13 is the same and/or is different from the receipt of the control signal recited in lines 7;

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c) if the recitation “in response to” refers to both a receipt of said control signal and a receipt of said inputted information, then the recitation “receiving said inputted information” in line 14 is indefinite because it has no apparent antecedent basis (i.e., a step of receiving said inputted program has not been positively recited);

d) if the recitation “in response to” only refers to the receipt of the control signal, then the recitation of “receiving said inputted information” creates confusion and multiple antecedents with respect to later recitations; and

e) Line 7 recites a step of “receiving” a “control signal”, line 13 recites another step of “receiving” “said control signal”, line 14 recites a step of “receiving” the “inputted information”, and finally lines 15 and 16 recite a step of “receiving” both “said control signal and said inputted information”. These recitations are confusing and indefinite because it is not clear how these various steps of receiving are related and/or how they are different. For example, does the recitation “said control signal” in lines 15 and 16 refer back to the control signal prior to being received by the step recited in line 7, to the control signal after being received by the step recited in line 7, or to the control signal which was both received and inputted (i.e. the received and inputted control signal of line 8).

Similar clarifications are needed throughout the claims.

16) When referred back to the written description, it is not clear how the “inputting” recited in line 8 of claim 56 is different from the “loading” recited in line 8; i.e. it appears that such a difference must exist if the use of the alternative “or” in the recitation “loading

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or inputting” is to have any justification. Similar clarifications are required throughout the claims.

17) In claim 56, lines 17 and 18, the term “said units” in the recitation “one of said units of programming” does not have clear antecedent basis and is confusing. Clarification could be made if the recitation “one of said units of programming” were change to read -- a unit of programming--. Similar clarification is needed throughout the claims (i.e. line 15 of claim 62).

18) Claims 63-84 require clarifications similar to those exemplified above.

7. Applicant is asked to review all of the claims and to correct any section 112 problems which are similar to those exemplified above.

8. Claims 10, 11, 13, 16, 17, 18, 19, 40, 42, 44, 49-52 and 82 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

**With respect to claims 10, 11,13,16,17,18,19,49-52 and 82:**

A) As described in the written description, it appears that at least two types of “data signals” were downloaded to the intermediate station: 1) first *data signals* which identified the television programming units with which they were associated; and 2) second *data signals* which represented a programming schedule and thus designated when and/or over which channels ones of the programming units were to have been communicated.

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B) When the terminology “data signals”, as used within the context of claims 10-12, is referenced back to the written description, it appears that the recitation of *data signals* must refer to the second type of data signals in that they are positively recited as being used to designate the units of programming which were to have been communicated [note: lines 10-12 of claim 10, lines 1-6 of claim 11, and lines 3-5 of claim 13]. However, this interpretation seems to be inconsistent with the recitation of “said [data] signals” in claim 17 wherein the recitation now appears to be used to refer to the first type of *data signals* (note lines 3 and 4 of claim 17).

C) Clarification is needed to show where the description provides clear support for the terminology “data signals” which is consistent with its recitations taken within the context of claims 10, 11, 13, 16, 17, 18, 19, 49-52, and 82 [note: 37 C.F.R. 1.75(d)(1) requires that: “the terms and the phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description”].

**With respect to claims 40, 42, 44, 49-52, and 82:**

A) It is not clear where the disclosure as originally filed enabled a method which controlled an intermediate transmission station in the manner that is recited in claim 40. More specifically, it is not clear where the disclosure enabled the method of controlling the intermediate station in which received television program units were selected, and output channels identified, both in response to the receipt of a control signal and in response to receipt of inputted information (note lines 13-16 of claim 40). Clarification is required.

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B) It is not clear where the disclosure as originally filed enabled a method of controlling an intermediate station, in the manner recited in claim 40, in response to all of: 1) a received control signal; 2) inputted information which had then been received; and 3) a received programming schedule. Clarification is required.

C) It is not clear where the disclosure as originally filed enabled a method of controlling an intermediate station, in the manner recited in claim 40, in which: 1) an output channel was identified in response to receiving the recited control signal and the recited inputted information (i.e. lines 15 and 16); and 2) an output channel was also designated via a received programming schedule (i.e. lines 17-19). Clarification is required.

***CLAIM REJECTIONS - 35 U.S.C. § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor



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and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haselwood et al. [US Patent # 4,025,851] in view of the publication “The Automation of Small Television Stations” by Young et al.

**I. The showing of Haselwood et al. [US Patent # 4,025,851]:**

The examiner maintains the Haselwood et al. patent broadly illustrates the configuration of a typical television broadcast and distribution system which existed at the time of applicant’s alleged invention. More specifically, Haselwood et al. evidences that it was well known for conventional television broadcast and distribution systems to have comprised the following basic elements:

- 1) a source of network programming for producing network television programming which was distributed (via 16) to a plurality of local affiliate broadcast stations [ the central network broadcasting station which is represented by elements 10, 12, 14, and 22 of figure 1]; and
- 2) the plurality of local affiliate broadcast stations (i.e. only one is shown as element “18” in figures 1 and 3) each of which, as represented in figure 3, comprised the following basic elements:

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a. means (@46) for receiving the network television programming from the network source via a transmission medium (16);

b. a source of local programming (44) which comprised a plurality of different television signal sources, wherein at least one of the sources included a video tape recorder which recorded portions of the network programming for delayed broadcast [see: lines 28-33 of column 3; and lines 29-39 of column 4]; and

c. a program selector<sup>1</sup> (46) which received the network programming from the network station (@16) and the locally produced programming from the local programming source (@ 44) and which selectively outputted one of these two received types of programming for “communication” over a predetermined television channel (via transmitter 42).

Given the structure outlined above, the Haselwood et al. patent then described the invention to which the patent was *really* directed; i.e. the means which enabled the network broadcast station to have monitored the programming being broadcast by each of

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<sup>1</sup> The examiner maintains that those of ordinary skill in the art at the time of applicant's alleged invention would have understood the illustrated “program selector” block “46” as having inherently comprised a conventional matrix type switching device in view that such switching devices well known components of the program selection arrangements found in affiliate broadcast stations.

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its affiliate stations. With respect to this invention, Haselwood et al. described circuitry which allowed: 1) the network station to have embedded codes into the network programming (@ 12 and 14 of figure 1) such that the embedded codes (see figure 4) identified the television programming units by title, source of origin, time of transmission, etc . . . [SEE: lines 51-68 of column 5; and lines 1-5 of column 6]; and 2) each affiliate station to have incorporated means (i.e. the computer system 30, 32, 34, and 36 of figure 3) for monitoring and “logging” the programming being broadcast from the affiliate station through the detection of the embedded codes. The computer system at each of the affiliate station was operable to report the results of said monitoring/logging process to a remote station location (i.e. to the centrally located host computer system 38 of figure 3).

## **II. Haselwood et al. applied against the limitations of claim 5:**

With respect to the limitations of claim 5, the following is noted:

- 1) a given affiliate station in Haselwood et al. corresponds to the recited “intermediate television transmission station”;
- 2) the network station in Haselwood et al. corresponds to the recited “remote television programming source”;
- 3) the plurality of television receivers in Haselwood et al. (not illustrated), which receive the programming from each of the affiliate stations, correspond to the recited “subscriber” locations;

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- 4) the network programming, which is stored in the tape recorders of the local programming source at the affiliate stations in Haselwood et al., corresponds to the recited “received and stored programming units”;
- 5) the embedded codes in Haselwood et al. correspond to the recited received “signals” from said “remote television programming source”; and
- 6) the computer processing system, located at each affiliate station in Haselwood et al. for monitoring and logging the affiliate station’s broadcasts, corresponds to a portion of the recited “computer” ( i.e. wherein the recited terminology “computer” has been broadly interpreted as having been inclusive of all structure at the affiliate station which operated “to compute”).

### **III. Differences between the recitations of claim 5 and the showing of Haselwood et al.:**

Claim 5 differs from the system disclosed by Haselwood et al. only in that the claim recites that “the computer” which was located at the affiliate stations received a programming schedule which was used by said computer so as to have controlled the storage and communication of the received/stored television programming units. More specifically, independent claim 5 includes the following recitations:

- a) Claim 5 recites that the “intermediate station” comprises a “computer” for controlling the storage and communication of television programming;
- b) Claim 5 recites that the received signals are inputted to “the” computer;

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c) Claim 5 recites that a programming schedule, which identifies the channel or the time at which programming units are to be communicated to a subscriber, is also received at “the” computer; and

d) Claim 5 recites that at least one of the stored programming units is broadcast from the intermediate station according to said received programming schedule.

#### **IV. The state of the “prior art” at the time of applicant’s invention:**

A. While not explicitly shown or described, the examiner maintains that the affiliate station of Haselwood et al. must have comprised control circuitry which would have enabled the station’s operator to have controlled the program source (44) and the program selector (46) to perform the tasks<sup>2</sup> required of them. More specifically, it is maintained that the affiliate station in Haselwood et al. inherently comprised control circuitry which:

1) controlled the local programming source (44) to have produced units of local television programming at appropriate/“scheduled” times and to have provided said produced local programming to one or more inputs of program selector (46); and 2) controlled the program selector (46) to have outputted received network television programming or produced local television programming to transmitter (42) for broadcast.

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<sup>2</sup>The lack of an explicit description of this “control circuitry” is maintained to have been: 1) an indication that the invention disclosed by Haselwood et al. did not rely on this feature; and 2) that Haselwood et al. disclosure assumed a level of skill in the art in which those of ordinary skill would have understood how elements “46” and “44” were to have been controlled; i.e. the lack of such description clearly was not an indication that such structure was not present.

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**B.** The publication “The Automation of Small Television Stations” by Young et al. has been relied on for its discussion of conventional control circuitry which was used to control conventional affiliate television stations. More specifically, the examiner maintains that the Young et al. publication exemplifies a conventional implementation of control circuitry which was required to have controlled affiliate television stations such as those which were broadly described in the Haselwood et al. patent. The Young et al. publication evidences that it was conventional for such control circuitry to have comprised: 1) a control panel [i.e. the “keyboard” of figure 3] which enabled the operator of the affiliate stations to have “*manually*” controlled the states and configurations of both the local programming source and the program selector; and 2) a processor [the “CPU” of figure 3] which could be loaded manually [i.e. the “keyboard” of figure 3] or automatically [via the “card reader” of figure 3] with data representing a “schedule of program switching events” whereby said processor was then able to have “*automatically*” controlled the states and configurations of both the local programming source and the program selector to output TV programming according to said “schedule of program switching events” without the need of further intervention by the station’s operator. The “automated mode” of affiliate station operation was recognized by those skilled in the art as having represented an improvement over the “manual mode” of affiliate station operation in that the automated mode only required the operator to be present for entry of the “schedule of program switching events” into the processor; i.e. after entry of the schedule, the operator was then free to pursue other tasks.

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**D.** In addition to the above showings, the publication by Young et al. was also relied on for the teaching as to the obviousness of having programmed the CPU of the control circuitry of an affiliate television station with data representing the schedule of switching events wherein the programming was performed from a remote location such as the network headquarters [note the first six lines in the third column on page 806].

#### **V. Obviousness:**

The examiner maintains that it would have been obvious to one skilled in the art to have implemented the control circuitry of the affiliate stations in Haselwood et al. using a conventional programmable CPU processing unit as was described in the Young et al. publication. Specifically, the examiner maintains that it would have been obvious to one skilled in the art to have implemented the control circuitry with a CPU processing unit which, under the instruction of data representing a schedule of switching events, would have *automatically*<sup>3</sup> controlled the operation of the local programming source and of the program selector to have outputted desired/scheduled units of TV programming. The motivation for this modification being that said modification was known to have desirably reduced required operator functions at affiliate TV broadcast stations to a minimum [see: the first paragraph on page 806 of the Young et al. publication]. The CPU processing unit of the modified system corresponds to another portion of the “computer” recited in the

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<sup>3</sup> The examiner notes that the term “automatically” has been used to indicate the fact that, after having been programmed with the data representing the schedule of switching events, said programmable CPU/MPU unit would have controlled the operation of the affiliate station operations without the need for further intervention/ input by the station’s operator.

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pending claim (again, wherein the recited terminology “computer” has been broadly interpreted as having been inclusive of all structure at the affiliate station which operated “to compute”).

11. Claims 2, 3, 8, 9, 10, 11, 13, 16, 18, 19, 49, 50-52, 56-71, 75 -78, and 80-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haselwood et al. [US Patent # 4,025,851] in view of the publication “The Automation of Small Television Stations” by Young et al.

The examiner maintains that it would have been obvious to one skilled in the art to have modified the system disclosed by Haselwood et al. in the manner set forth in **paragraph 10** of this Office action. The following is noted:

1) With respect to claims 8, 10, 58, and 60: it is noted that selector 46 in figure 3 of Haselwood et al. operates to select one of the network programming and the local programming, wherein the local programming is provided from local source (46) which includes at least one video tape recorder for providing previously recorded/“stored” network programming.

2) With respect to claims 9, 56, and 61, it is noted that computer 30 in figure 3 of Haselwood et al. logs the communicated programming.

3) With respect to claim 10, it is noted that the embedded codes in Haselwood et al. correspond to the recited “plurality of signals” because they are used in Haselwood et al. to identify the program units into which they have been



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embedded and thus each code inherently *designates* the respective unit into which it has been embedded.

4) The schedule of switching events in the modified system of Haselwood et al. corresponds to the “programming schedule” recited in claim 11 in that it at least designates the time at which programming units were to have been communicated. Claims 13 and 57 are met for this same reason.

5) With respect to claim 16, it is noted that the recorders of the local programming source in the modified system of Haselwood et al. corresponds to the storage device of claim 16.

6) With respect to claim 18, the examiner maintains that it would at least have been obvious to one skilled in the art for the modified system of Haselwood et al. to have carried teletext data and/or closed-caption data in addition to the disclosed embedded program label data; i.e. typical services provided by many conventional broadcast systems.

7) With respect to claim 49, it is noted that the embedded data in Haselwood et al. includes a program identification code (see lines 63-65 of column 5).

8) With respect to claims 50 and 19, it is noted that the communicated programming was logged via the Haselwood et al. in a manner that included its time of communication (note lines 14-20 of column 11).

9) With respect to claims 51 and 52, the following is noted:

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>The examiner notes that claims 51 and 52 recite a “remote information source”. However, these claims fail to positively define the intended meaning of the term “remote” of this recitation; i.e. remote from what?

> With respect to the modified system of Haselwood et al., the examiner maintains that it would have been obvious to one skilled in the art to have locating the operator interface control circuitry at a central control room location “remote” from the VTRs, Microprocessors, and switches of the affiliate station.

>Alternatively, as noted above, teachings found in the publication by Young et al. evidenced the obviousness of having programmed the CPU/MPU of the modified system from a remote network headquarter location [note the first paragraph in the third column on page 806 of Young et al.].

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*----The examiner notes that with respect to claim 10, line 11, applicant’s election to use the alternative “or” terminology means that the applied prior art needs only show one of the recited alternatives in order to meet the portion of the claim that sets forth the alternative. The examiner takes a similar position wherever and whenever applicant elects to use such alternative expressions----*

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12. Claim 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haselwood et al. [US Patent # 4,025,851] in view of the publication "The Automation of Small Television Stations" by Young et al and further in view of the publication "Microprocessor for CATV Systems" by Tunmann et al.

The examiner maintains that it would have been obvious to one skilled in the art to have modified the system disclosed by Haselwood et al. in the manner set forth in **paragraph 11** of this Office action. The following is noted:

a) Claim 7 claim differs from the modified system of Haselwood et al. only in that claim 7 requires the affiliate station to have received programming and signals from a plurality of network feeds; i.e. as opposed to a single feed in the modified system of Haselwood et al.

The Tunmann et al. publication has been cited because it shows that those skilled in the art had recognized the obviousness of having simply extended the automation structure which was used for single channel affiliate broadcast stations [i.e. as represented by the modified system of Haselwood et al. set forth in paragraph 11 of this Office action] to cable broadcast applications in which a headend/hub received multiple programming signals from multiple sources and selectively outputted ones of said received signals for broadcast over a plurality of TV channels [note the discussion under the heading "Switching Requirements" on page 70 of Tunmann et al.].

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Given the above, the examiner maintains that it would have been obvious to one skilled in the art to have extended the modified system of Haselwood et al. So that it could be used within CATV headend hub wherein the affiliate station would have comprised multiple receivers for receiving programming from multiple network feeds; i.e. the motivation for the modification being provided by Tunmann et al.

13. Claims 20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haselwood et al. [US Patent # 4,025,851] in view of the publication "The Automation of Small Television Stations" by Young et al. and further in view of Kamishima et al. [JP 56-51161].

I. Claims 20, 22, and 23 differ from the modified system of Haselwood et al., as was set forth in **paragraph 10** of this Office action, only in that claim 20 that the recited computer selects the program units designated by the program schedule "*based upon said received and stored signal*". In the modified system of Haselwood et al., the received and stored signals (i.e. the program codes which were embedded in the network programming) were disclosed only the purpose of logging program transmissions; i.e. not as a basis for selecting the programs to be transmitted according to the program schedule.

II. Kamishima et al. has been cited because, like the publications by Young et al., it too disclosed control circuitry for automatically controlling the program selector of an affiliate TV station [note "APE" 5 of figure 1 which controls matrix switch 4]. However, in Kamishima et al., the control circuitry also included means (6) for monitoring the operation of the program selector (4) in order to determine whether the program selector

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was operating properly; i.e. according to the programed "schedule of events" stored within the control circuitry. Specifically, the means for monitoring compared program labels which were actually extracted from the TV programming outputted by the switch/"program selector" with program labels derived from the schedule of switching events contained within APE (5) [note the last 8 lines on page 10 of the translation]. If an abnormality was detected, the program selector was immediately switched so as to have outputted secondary TV programming [note the last two lines on page 10 of the translation].

III. The examiner maintains that it would have been obvious to one skilled in the art to have further modified the system of Haselwood et al. so as to have included the monitoring circuitry disclosed by Kamishima et al. This further modification would have allowed the modified system of Haselwood et al. to have actually determined whether the affiliate TV station was selecting and outputting television programming as scheduled; i.e. which was clearly a desirable feature and was one which was required by the FCC. Thus, via this modification, the output of the program selector becomes a function of the embedded codes found within the stored network programming (i.e. as is claimed).

14. Claims 31, 50, 51, 53, 55 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haselwood et al. [US Patent # 4,025,851] in view of the publication "The Automation of Small Television Stations" by Young et al. and further in view of Kamishima et al. [JP 56-51161] for the same reasons that were set forth for claims 20, 22, and 23 in **paragraph 13** of this Office action.

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15. Claims 2, 3, 10, 11, 13, 19, 31, 51, 53, 55-71, 75 -78, and 80-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over the publication "Microprocessor for CATV Systems" by Tunmann et al in view of in view of the publication "The Automation of Small Television Stations" by Young et al and the publication "The Digitrol 2~Automatic VTR Programme Control" by Skilton.

**I. The showing of Tunmann et al:**

Tunmann et al has been cited because it evidences that it was well known in the art, at the time of applicant's alleged invention, to have equipped the *headend/hub* of a CATV distribution system with a programmable switching device. The Tunmann et al reference also shows that it was conventional for such switching devices to have been programmed so as to have *automatically* outputted selected ones of a plurality of "off-air" and "locally originated" television programs for distribution to a plurality of subscribers over a plurality of conventional CATV television channels. Tunmann et al also described means which enabled said switching device to have been programmed through operator entered inputs which represented a predetermined schedule of television program switching events. As shown in figure 5, the Tunmann et al publication the programmable switching device included:

A. The switching circuitry which is shown in figure 6; and

B. A microprocessor which operated according to the functional block diagram of figure 1. Specifically, a microprocessor which operated: to receive said operator inputs, entered either locally via the "KEYBOARD" or remotely via the

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“REMOTE CONTROL UNIT TOUCH TONE DECODER”, which were processed by the microprocessor in order to create said schedule of switching events. Said schedule of events represented up to 16 switching functions controlled in up to 196 different time slots. By processing the switching schedule, said microprocessor produced the control signals which were needed to configure said switching circuitry to select the ones of the television programs which were to have been distributed to the subscribers.

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With respect to the claim limitations:

- 1) The headend/hub disclosed by Tunmann et al. corresponds to the recited “intermediate transmission station”;
- 2) The microprocessor in Tunmann et al. corresponds to the recited “computer”;
- 3) The sources of the off-air television programming in Tunmann et al. correspond to the recited “remote television programming sources” which provides television programming units;
- 4) The sources of locally originated television programming in Tunmann et al. correspond to the recited “local programming sources”;
- 5) The operator entered inputs in Tunmann et al. correspond to the recited “plurality of signals”, while the remote source of said operator entered inputs in

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Tunmann et al. corresponds to the recited "remote programming source" which provided said recited "plurality of signals"<sup>4</sup>; and

6) The generated switching schedule in Tunmann et al., which is created in response to the operator entered inputs, identifies the programming units which are to be communicated to the subscriber(s).

## II. Differences:

Claim 10 differs from the system disclosed by Tunmann et al. only in that claims recite: that the "programming units" provided by the "local programming source" comprised a plurality of prerecorded units which had been loaded onto said local programming source.

## III. The showing of Skilton and Young et al.:

Both of the publications by Young et al. and Skilton are directed to automatic program control systems which were used to automate the selection and transmission of TV programming at local/"affiliate" TV stations and/or CATV headends. Both of these references evidence that the local programming sources of such systems conventionally comprised VTRs which were loaded tapes containing prerecorded local programming

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<sup>4</sup> The examiner notes that the limitations of the claims fail to distinguish the disclosed "signals" which were downloaded with the programming units for the purposes of labeling the program units, from the disclosed "signals" which could be downloaded with the program units for the purposes of programming the intermediate stations with schedule information. Thus, for the purposes of this rejection, the examiner maintains that it is proper to read the term "signals" (as is now recited in the pending claim(s)) on the signals of the applied prior art which represent downloaded schedule information in view that this schedule information was used by the prior art to have designated and identified all units of programming which were to have been transmitted at any given time and on any given channel.



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such as advertisements. [Note: the first full paragraph under the heading “Applications” on page 61; and the last nine lines on page 60 of Skilton; and the first paragraph under the heading “Switcher Inputs” on page 808 of Young et al.]

**IV. Obviousness:**

In evidenced by the showing of Skilton and Young et al., it is maintained that it would at least have been obvious to one skilled in the art to have implemented a portion of the local programming source in the system disclosed by Tunmann et al. with conventional VTRs loaded with cassette tapes containing prerecorded local programming.

**V. The following is noted:**

1) With respect to the limitation of claims 11 and 13, it is noted that the operator entered programming schedule described in Tunmann et al defined both the time and the channel over which desired programming units were to have been communicated to subscribers [note the second column on page 73 of Tunmann et al];

2) With respect to the limitations of claims 19, it is noted that the system disclosed by Tunmann et al includes a printer for “logging” executed commands representing the communicated programming [see the last three lines of the first paragraph under the heading “8. Use of Advanced Microprocessor” on page 75];

3) With respect to claim 82, the examiner maintains that it would at least have been obvious to one skilled in the art for the TV programming in claim 82 to have contained additional data such as teletext or closed caption data.

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16. Claims 5, 8, 9, 50, 51, 52, and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over the publication "Microprocessor for CATV Systems" by Tunmann et al in view of the publication "The Automation of Small Television Stations" by Young et al and the publication "The Digitrol 2~Automatic VTR Programme Control" by Skilton.

The examiner maintains that it would have been obvious to one skilled in the art to have modified the system disclosed by Tunmann et al in the manner set forth in **paragraph 15** of this Office action. The following is noted:

a) The claims further differ from Tunmann et al only in that claim 5 specifies that the "remote television programming source" which provided the television programming was the same as the "source" which provided the "signals". The examiner maintains that this recitation is rendered obvious from the teaching Young et al as to the obviousness of downloading the signals representing schedule information from the network headquarters (see the first full paragraph in the third column on page 108); i.e. the network being the source of both television programming and the schedule information.

17. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the system disclosed in the publication "Microprocessor for CATV Systems" by Tunmann et al in view of the publication "The Automation of Small Television Stations" by Young et al and the publication

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“The Digitrol 2~Automatic VTR Programme Control” by Skilton, as was set forth in **paragraph 16** of this Office action, further in view of Haselwood et al. [US Patent # 4,025,851].

The claims differ from the modified system of Tunmann et al only in that the claim 16 recites that the prerecorded programming comprises recorded received/“network” programming.

As has been fully addressed in **paragraph 10** of this Office action, Haselwood et al. evidences: that it was well known in the art for the prerecorded local programming to have comprised recorded network programming [note lines 31-33 of column 3 and lines 36-38 of column 4]; and that it was well known for a network to have monitored and logged the broadcasts of its affiliate stations, by embedding program labels into the network programming, in order to confirm proper airing of its network broadcasts by said affiliate stations [note elements 28,30,32,34, 36, and 38 of figure 3].

The examiner maintains that it would have been obvious to one skilled in the art for the prerecorded local programming in the modified system of Tunmann et al to have comprised received and recorded network programming as was taught by Haselwood et al. Further, the examiner maintains that it would have been obvious to have added the means for monitoring and logging network programming, as taught by Haselwood et al., to the modified system of Tunmann et al in order to have enabled independent network confirmation of network broadcasts; i.e. in addition to the monitoring performed by the affiliates themselves as was already described in Tunmann et al.

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18. Claims 72-74, 81, and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Australian Patent specification by Hetrich [S.N. 74619] in view of the publication "The Automation of Small Television Stations" by Young et al.

**I. The showing of Hetrich:**

The Hetrich patent has been cited because it describes a system for transmitting control signals from a master network station location to a plurality of local member stations wherein said control signals enable functions at each of the plurality of member stations to be control from the master network station. As shown in figure 1, Hetrich illustrates a radiobroadcast and distribution network which comprises:

- 1) the master station (10) which includes: a radio program source (12) for generating network radio programming; a netcue transmitter (20) for generating the control signals (or "que's"); and means (labeled "node A" by the examiner) for combining the generated control signals with the network programming thereby creating a combined signal;
- 2) a network distribution system (14) for distributing the combined signal from the master station to the plurality of member stations; and
- 3) said plurality of member stations (16) which include: a program utilization device (18) which receives the combined signal and which utilizes the network programming of said combined signal in a predetermined manner; a netcue receiver (22) for receiving the combined signal (@26), extracting the control signal from the combined signal (@27), and generating a decoded control signal output (@ 28, 30,32,&56); and control circuits (24) for controlling the program utilization circuitry (18) to utilize the network programming in said predetermined manner which is a function of the decoded control signal output.

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Given the system structure described above, the following is noted:

1) By transmitting the control signals from the master station (10) to the member stations (16), the system disclosed by Hetrich allows various function at the member station to be controlled from the master station location. Hetrich cites the following as examples the type of function which can be controlled using his system:

A. Controlling the interruption in the broadcast of local programming for insertion of programming corresponding to emergency announcements, news events and the like [see lines 5-11 on page 2];

B. Controlling functions at the member station involving program advisories, changes in the program schedule, cancellation of feeds, and the like [see lines 5-11 on page 2];

C. Controlling the start and stop of recorders located at the member stations in order to record special programs for later/"delayed" broadcast by the member station [see the last 4 lines on page 10]; and

D. Controlling the switching of local and network programming at the member station [see the last 4 lines on page 10].

2) Hetrich's disclosed invention clearly pertains to the control circuitry which allows functions at the member stations to be controlled from the master station location. This explains why the Hetrich publication provides a detailed description of the structure which is used to transmit and decode the control signals (see figure 2) yet does not provide a detailed description of the structure which comprises the program utilization portion (18) of the illustrated system. Specifically, the lack of a detailed description of the program utilization portion is maintained to be a clear indication that such structure is representative of well known "prior art" and thus needs no little explanation. However, even in spite of the lack of a detailed explanation, the examiner maintains that enough details are given that the following well known structures of a member station can be inferred from those teaching of the Hetrich disclosure which are provided:

A. The examiner maintains that the program utilizer "18" in figure 1 of Hetrich inherently comprises a source of local programming, in addition to the illustrated sources of network programming "12", as is evidenced by the teaching that the control circuitry "24" controls the switching of local and network programming [see the last 4 lines on page 10];

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B. The examiner maintains that the program utilizer "18" in figure 1 of Hetrich inherently comprises a matrix type switching device as is evidenced by the teaching that the control circuitry "24" controls the switching of local and network programming [see the last 4 lines on page 10];

C. The examiner maintains that the program utilizer "18" in figure 1 of Hetrich inherently comprises means for outputting and re-broadcasting the local and network programming according to an established program schedule as is evidenced by the need to control operations of program utilizer in response to an output of the control circuitry "24" wherein the changed operation relates to changes in *"the program schedule"* [see lines 7-9 on page 2]; and

D. The examiner maintains that the program utilizer "18" in figure 1 of Hetrich inherently comprises a recorder which automatically records selected portions of the received network programming so that the received portions can be played back and re-broadcast after an appropriate delay; i.e. an alternative to being broadcast directly without a delay [see: the last 4 lines on page 10].

3) While Hetrich's detailed description focusses on an embodiment of invention in which the disclosed control system is used to control a radio broadcast and distribution network, the examiner maintains that one skilled in the art at the time of applicant's invention would have recognized the obviousness of having used Hetrich's disclosed control circuitry to have controlled the broadcast and distribution of television programming. The examiner's position is explicitly supported by teaching found within the Hetrich publication [See: the first four lines on page 2].

## **II. Differences:**

It is maintained that claims 72-74, 81, and 82 differ from the system disclosed by Hetrich, as applied to a television broadcast and distribution network environment, only in that claim 72 recites:

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- 1) That the local transmission station comprises a "computer" for controlling the communication of local and network programming;
- 2) That the program schedule "is received" and is used to control the communication and broadcast of the local and network programming; and
- 3) That the communication and broadcast of programming is logged.

### **III. The showing of Young et al.:**

The publication by Young et al. has been cited for the following showing:

- 1) For the showing that it was well known at the time of applicant's invention to have controlled the communication of local and network programming via a computer (the "CPU" of figure 3) into which was loaded a schedule of switching events which represented the order and times in which both the local and network programs were to have been broadcast; i.e. the recited "program schedule" [note: the "card reader" and the "keyboard" of figure 3; the first nine lines of the second column on page 806; the first six lines of the third column on page 806; etc...]; and
- 2) For the showing that it was known and desirable at the time of applicant's invention to have created a log of the communicated television programming [note figure 6]. In fact, the examiner notes that conventional television stations were required by the FCC rules to have maintained such program logs.

### **IV. Obviousness:**

Based on the showing of Young et al. as set forth above, the examiner maintains that it would have been obvious to one skilled in the art to have implemented the control circuits "24" in the system disclosed by Hetrich so as to have included a computer into which a received television program schedule was entered. Further, the examiner maintains that it would have been obvious to one skilled in the art to have implemented the member stations "16" of Hetrich so as to have included means for maintaining a log of the

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programming which was communicated from the station in view that such means: was well known by those skilled in the art (note figures 3 and 6 of Young et al.); and was required by the rules of the FCC.

19. Claims 3-35 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Australian Patent specification by Hetrich [S.N. 74619] in view of the publication "The Automation of Small Television Stations" by Young et al as was set forth in paragraph 18 of this Office action. The foloowing is noted:

a) Claim 31 is met for the same reasons that were set forth for claims 72-74, 81, and 82 in paragraph 18;

b) With respect to claims 32, 33, and 34, it is noted that the control signal in Hetrich which controls the video recorder to record special programs for delayed broadcast (note: the last 4 lines on page 10) corresponds to the recited "instruct-to-delay signal". For the such a selected portion to be recorded and delayed, the portion must be identified by, and with respect to, the control signal which directs the recording of said selected portion.

c) With respect to claim 35, it is noted that the control signal in Hetrich which controls the switch to output either local or network programming corresponds to the recited "instruct-to-communicate signal".

20. The examiner notes that the prior art has been applied to the claims to the extent of the examiner's understanding in view of the section 112 problems.



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21. Claim 34<sup>6</sup>-38, and 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Faile whose telephone number is (703) 305-4380.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

DEH 9/2/97

  
ANDREW FAILE  
SUPERVISORY PATENT EXAMINER  
GROUP 2600